

Abstract

This study investigates the impact of conservative physiotherapeutic interventions on pes planovalgus in preschool and early school-aged children.

The theoretical part provides a description of the anatomical structures of the foot, an introduction to selected conservative methods used in physiotherapeutic intervention applied to the therapeutic group of subjects, an outline of diagnostic possibilities for pes planovalgus, a description of indices further utilized in the practical section, and an explanation of terms such as podoscope or plantogram. The second part of the study then theoretically describes the methods applied in practice within the research on the impact of physiotherapeutic intervention on pes planovalgus.

A total of 20 subjects were included in the data processing. In both the therapeutic and control groups, there were 10 children with pes planovalgus aged between four and twelve years. Participants in the therapeutic group underwent three 25-minute exercise sessions led by a physiotherapist, preceded by a 50-minute visit for history taking, initial examination, and first therapy session. Subjects and their parents were also educated on self-therapy at home. After completion of the physiotherapeutic intervention cycle, exit measurements and data processing were conducted, calculating Clark angle, Staheli index, and Chippaux Smirak index from plantograms taken on the podoscope. The obtained data were compared using a paired Student's t-test at a significance level of 0.05 and tabulated.

The results indicate that the chosen physiotherapeutic intervention had a positive effect on subjects in the research group. An interesting anomaly is the strong rejection of the null hypothesis for the Clark angle value of the right foot in the control group, where a p-value of 0.00077 suggests significant improvement in the untreated group.

Key words: Paediatric physiotherapy, Flat feet, Clark angle, Staheli index, Chippaux-Smirak index